



Operating Instructions

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Aluminum Cyclone 25 mm - Cat. No. 225-01-01 37 mm - Cat. No. 225-01-02

The SKC Aluminum Cyclone

The SKC Aluminum Cyclone is a lightweight respirable dust sampler that is used with a filter loaded into a three-piece 25 or 37-mm filter cassette.

Flow rate: 2.5 L/min* to conform to the ISO 7708/CEN criteria included in the OSHA silica rule (page 16439)
 Other flow rates may be used to achieve cut-points for alternate applications

* As previously published, a flow rate of 2.6 L/min will give a 4- μ m 50% cut-point, however, 2.5 L/min will give a better match over the entire curve.

Operation

Assembly

1. Disassemble a three-piece cassette and set aside inlet section (usually marked "inlet"). Remove plug from cassette outlet.
2. Select a filter and support pad as specified in the sampling method. Insert cassette ring (middle) section into cassette outlet. See Figure 1.
3. Insert cyclone into cassette ring and press firmly. **Leave grit pot in place during calibration and sampling.**
4. Insert cyclone/cassette assembly through large opening of filter cassette holder (see Figure 3). Ensure assembly is seated firmly in holder by inserting the cyclone's side pin (small round nodule on rim of cyclone) into the notch in the filter cassette holder.
5. Secure assembly in holder by stretching the spring-loaded hold-down plate over the cassette. Insert Luer adapter (located in end of rubber tubing) into cassette outlet.

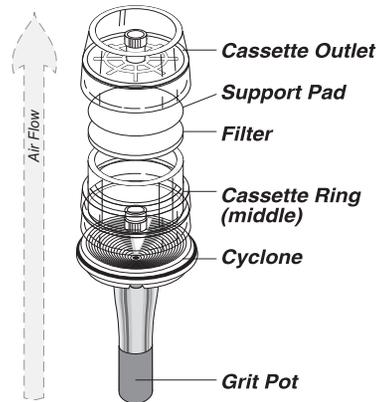


Figure 1.
 Exploded view of the cyclone/filter cassette assembly

Calibration

1. Prepare a cyclone/filter cassette assembly. See Assembly. **Calibrate the cyclone with grit pot in place.**
2. Moisten O-ring inside large end of calibration adapter (Cat. No. 225-01-03, see Figure 2) and push adapter over cyclone stem until it fits snugly.
3. Connect the Tygon® tubing attached to the filter cassette holder to the inlet of a sampling pump. Using flexible tubing, connect the calibration adapter to a calibrator.
4. Following instructions in the pump and calibrator manuals, calibrate to required flow rate. See reverse side.
5. Disconnect calibrator and replace filter used to set flow with a fresh weighed filter (unused) for sample collection.

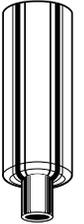


Figure 2.
 Calibration Adapter

Sampling

1. Ensure flow rate has been calibrated. See Calibration.

Warning: Leave grit pot in place during calibration and sampling.

2. Connect the Tygon tubing attached to the filter cassette holder to the inlet of a sampling pump.
3. Clip cyclone/filter cassette assembly onto a worker's collar or pocket near the breathing zone.
4. Start pump and record pertinent details.
5. At the end of the sampling period, stop pump and record finish time. Remove cyclone/filter cassette assembly from cassette holder. Separate cyclone from cassette. Reassemble inlet section of cassette, ensuring the inlet and outlet are sealed with plugs. Send cassette and all data to a laboratory for analysis.
Note: Particles collected in the grit pot do not represent any part of the respirable dust sample and should be discarded.
6. Prior to further sampling, clean all parts of the cyclone, including the interior of the grit pot, with mild soapy water. The cyclone may be wiped with a clean dust-free tissue, air dried, blown dry, or wiped with isopropyl alcohol.

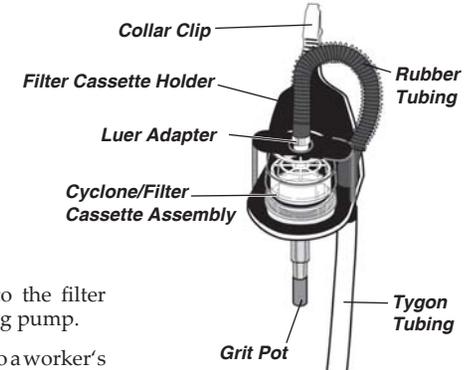


Figure 3.
 Cyclone with filter cassette in holder

Accessories		Cat. No.
Three-piece Filter Cassette Blanks	25 mm	225-3-25LF
	37 mm	225-3LF
Filter Cassette Holder	25 or 37 mm	225-1
Calibration Adapter	25 or 37 mm	225-01-03

References

See SKC Technical Note, Publication 1519, at www.skcinc.com.

OSHA Final Rule on Respirable Crystalline Silica, www.osha.gov/silica/

SKC Limited Warranty and Return Policy

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